

A1
cont

As the water is diverted from the loop it enters the WTA at the pump 50 intake 1 and flows through pump 50, via a flowswitch 62, which pumps the water up into a pressure differential valve (PDV) 52, or control box, which diverts the untreated water down through an optional multimedia sediment filter tank 54. As the filtered water exits the filter 54 the PDV 52 diverts the waste water out through an exit (not shown) and the treated water is diverted through ball valve 64 and flowswitch 66 through two separate electrode chambers 55, the first of which includes a pair of electrodes 56 at least one of which comprises a plasma fused iridium coated titanium electrode or, preferably, a titanium electrode which has been coated with ruthenium. The second electrode chamber contains a pair of electrodes 58 formed of copper. The electrode chambers are controlled by electronics 60 and a timer 68, further discussed below, which also controls the filter 54 and the pump 50. After the second electrode chamber, the filtered and treated water is returned to the condensing loop via outlet 4 for discharge over the cooling tower surfaces and circulation through the condensing water loop. The piping is preferably one inch PVC piping. --

In the Claims:

Please amend the claims as follows:

- A2
1. (Amended) A cooling water system having a condensing water loop, comprising:
- a condenser system;
 - a cooling tower having water sides surfaces and a basin; and
 - a water treatment apparatus comprising:
 - a pump having:
 - an inlet port and an outlet port, said inlet port being connected to an incoming water line for supply water to be treated, drawn from the condensing water loop of the cooling water system;
 - a first electrode ionization chamber comprising:
 - an inlet port and an outlet port, said pump outlet port communicating with said first electrode ionization chamber inlet port; and
 - two ion-producing electrodes spaced apart, wherein at least one of said ion-producing electrodes comprises a titanium electrode coated with ruthenium; and

a second electrode chamber comprising:

two ion-producing electrodes spaced apart; and

an inlet port and an outlet port;

wherein the electrode chambers communicate with the condensing water loop such that water in the loop is circulated through the electrode chambers.

4. (Amended) A system according to Claim 3, wherein said first electrode ionization chamber outlet port is connected to said second electrode chamber inlet port, wherein the outlet port of said second electrode chamber is connected to the condensing water loop to enable water discharged from the apparatus to be dispersed uniformly and completely over the water side surfaces of the cooling tower.

26. (Amended) An evaporative cooling system of the type blowing air over a wet surface, the improvement comprising:

oxidation apparatus for oxidizing water prior to supplying the water to the evaporative cooling system, wherein the oxidation apparatus utilizes a titanium electrode coated with ruthenium, and

ionization apparatus for ionizing the water with copper ions prior to supplying the water to the evaporative cooling system.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version with markings to show changes made."

REMARKS

The following is responsive to the official action mailed November 5, 2002. Each issue is discussed in detail below.

Objections

(1)